

In re Application of:
Randall Ho et al.
Application No.: 09/929,295
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PATENT
Docket No.: EYEM1360

REMARKS

In the pending Office Action, claim 1 was rejected under 35 U.S.C. § 102(b) as allegedly anticipated by U.S. patent number 6,072,496 to Guenter et al. Claims 2 and 3 were rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over the Guenter patent in view of U.S. patent number 5,828,769 to Burns.

Applicants respectfully traverse each of the rejections and respectfully request reconsideration of this application in light of the following remarks.

The rejection of independent claim 1 as allegedly anticipated by the Guenter patent is respectfully traversed. Independent claim 1 recites a method for generating a three-dimensional (3D) animated video head. A video image frame, from a sequence of two-dimensional image frames, is warped for projection onto a shaped head mesh. The warped video image frame is then texture mapped onto the shaped head mesh to generate a three-dimensional frame head associated with the respective video image frame. The Guenter patent teaches generating a final texture map for each frame using a weighted average of six preliminary texture maps from respective camera images taken with differing views. Then, the texture map is warped. See, column 18, lines 5-17. Thus, the Guenter patent fails to disclose "texture mapping the warped video image frame" as recited in claim 1. Instead, the Guenter patent discloses warping the texture map. The Guenter patent generates the texture map before warping because it is premised on tracking of 3D positions of markers at locations on the face, and using the 3D positions to distort a 3D face of a head model. See, column 5, lines 1-45. Eliminating 3D tracking is a significant advantage of the present invention. Accordingly, independent claim 1 defines a patentable advance over the Guenter paper, and should now be allowed.

The rejection of claim 2, which depends on independent claim 1, as allegedly unpatentable over the Guenter patent in view of the Burns patent is respectfully traversed. Claim 2 recites that facial feature location sensing is performed using facial image frames generated using wavelet transformations. The Burns patent briefly mentions Gabor wavelets in a

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background discussion related to moment-based approaches to image recognition. The Burns patent then immediately teaches that a "shortcoming to moment-based recognition, however, is the instability of moments with respect to oclusions, image clutter and other disruptions, for example. As a result, moments traditionally have been used to detect objects that are relatively isolated or in silhouette form." See, column 3, lines 1-5. Applicants assert that the Burns patent, taken as a whole, fails to motivate one skilled in the art to combine the teachings of the Burns patent with the teaching of the Guenter patent. In the Office, the Examiner asserts that the "motivation for doing so is to provide visual recognition of an object of an image under variations of three dimensional position and orientation of the object." See, Office Action, page 3. Applicant's representative is unable to locate any discussion in the Burns patent describing the advantages asserted by the Examiner. The showing of motivation to combine references is an essential component of an obviousness holding, and the factual inquiry of whether to combine references must be thorough, searching, and based on objective evidence of record. See, In re Lee, 61 U.S.P.Q.2d 1430 (Fed. Cir. 2002). Further, reliance on conclusory statements related to motivation to combine references without setting forth the rationale on which the conclusory statements rely violates the agency obligations under the Administrative Procedure Act. Id. Applicants asserts that the stated rejections fail to make the requisite showing of motivation to combine the cited references, and to set forth the objective evidence of record supporting the showing of motivation to combine the references. For these reasons, and the reasons given above with respect to independent claim 1, the rejection of claim 2 is improper, and claim 2 should now be allowed.

The rejection of claim 3, which depends on independent claim 1, as allegedly unpatentable over the Guenter patent in view of the Burns patent is respectfully traversed. Claim 3 recites that facial feature location sensing is performed using facial image frames generated using Gabor wavelet transformations. For the reasons given above with respect to claim 2, claim 3 likewise should now be allowed.

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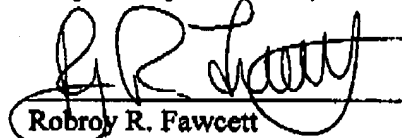
The amendments to the specification merely correct the technical form of the priority claim, and insert the patent numbers of the respective issued patents, or the publication number, associated with the referenced patent applications.

The amendment to claim 1 merely corrects a grammatical inconsistency and does not narrow or limit the scope of the claim. New claims 4-6 are supported in the original specification by Figures 1 and 2, and related text.

CONCLUSION

In view of the above amendments and remarks, reconsideration and prompt evaluation of all pending claims are respectfully requested. If any questions or issues remain, the Examiner is invited to contact the undersigned at the telephone number set forth below so that prosecution of this application can proceed in an expeditious fashion.

Respectfully submitted,



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